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| **Lesson Plan for Module #6: Data Sharing & Re-Use Policies** |
| LearnerObjectives | By participating fully in this class, students will be able to:1. Explain the benefits of sharing data
2. Identify issues/obstacles related to reuse and sharing of data
3. Understand open access/open science/open data
4. Understand data reuse/sharing/access policies from funding agencies, institutions and publishers
5. Recognize the need to use standard data formats, consistent file naming conventions, etc.
6. Contrast sharing data within and outside of a research team
7. Understand the need for data attribution and citation
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| Lecture Content | 1. Overview of the history of sharing data
2. Overview of data reuse and sharing issues and obstacles
3. Review of potential legal restrictions
4. Review of funding agency data sharing requirements
5. Review of publisher requirements
6. Review of open data
7. Standard data formats and records management facilitating reuse
8. Sharing data within and outside a research team
9. Conventions for citing data
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| Activities | 1. Investigate whether there is an open access policy at your institution
2. Compare policies of non-open publishers and open publishers

 1. Complete a data citation [activity](http://library.umassmed.edu/necdmc/necdmc_activity6a.docx)
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| Assessment | Reflect on your research. Have you encountered any issues with sharing your data? Have you reused another researcher’s data? Would you publish in an open access journal? Do you plan to make your data sets publicly available? Discuss how you share data among your team and outside your team.  |
| Readings | 1. Guttmacher, A.E., Nabel, E., and Collins, F.S. (2009). Why data-sharing policies matter. [Why data-sharing policies matter](http://www.pnas.org/content/106/40/16894.short) <http://www.pnas.org/content/106/40/16894.full>
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3. Lathrop, R.H. and Burkhard, R. (2011). ISCB Public Policy Statement on Open Access to Scientific and Technical Research Literature. [http://www.ploscompbiol.org/article/info%3Adoi%2F10.1371%2Fjournal.pcbi.1002014](http://www.ploscompbiol.org/article/info%3Adoi/10.1371/journal.pcbi.1002014)
4. National Academies. 2010. The Value of Shared Access and Reuse of Publicly Funded Scientific Data. <http://sites.nationalacademies.org/PGA/brdi/PGA_059258>
5. Vision, T. (2010). Open Data and the Social Contract of Scientific Publishing . OECD Publishing White Papers, OECD Publishing. <http://www.jstor.org/stable/10.1525/bio.2010.60.5.2>
6. Birney, E., Hudson, T.J., Green, E.D., Gunter, C., Eddy, S., Rogers, J., Harris, J.R., et al. “Prepublication Data Sharing.” *Nature* 461, no. 7261 (2009): 168–170. <http://www.ncbi.nlm.nih.gov/pubmed/19741685>
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9. Ball, A. & Duke, M. (2012). How to Cite Datasets and Link to Publications. DCC How-to Guides. Edinburgh: Digital Curation Centre. <http://www.dcc.ac.uk/resources/how-guides/cite-datasets>
10. Altman, M. & King, G. (2007). A proposed standard for the scholarly citation of quantitative data. D-Lib Magazine, 13(3/4). <http://www.dlib.org/dlib/march07/altman/03altman.html>
11. Green, T. (2009). We need publishing standards for datasets and data tables. OECD Publishing White Papers, OECD Publishing. [http://www.oecd.org/document/25/0,3746,en\_21571361\_33915056\_42600857\_1\_1\_1\_1,00.html](http://www.oecd.org/document/25/0%2C3746%2Cen_21571361_33915056_42600857_1_1_1_1%2C00.html)
12. Mayernik, M.S. (2012). Data citation initiatives and issues. Bul. Am. Soc. Info. Sci.Tech., 38: 23–28. doi: 10.1002/bult.2012.1720380508. <http://www.asis.org/Bulletin/Jun-12/JunJul12_MayernikDataCitation.html>
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